CLAIMS

1. A conditioning device for plastic items (5) comprising a turret (6), having at least one face (6', 6") provided with a plurality of cavities (7) for conditioning the items (5) adapted for holding inside said items, the turret being fixed to a supporting structure with motor means adapted to make the turret carry out spatial movements, characterised by the fact that said turret (6) has a structure comprising a first bar (18) in the shape of a parallelepiped and a second bar (19) parallel to the first bar, and wherein said first and second bar are reciprocally joined onto each face (6', 6") by one or more substantially rectangular plates (14, 17), having a thickness smaller than that of said first and second bars, the substantially rectangular plates being fastened to opposite ends with the first (18) and the second bar (19), respectively.

2. A device as claimed in claim 1, wherein the conditioning cavities (7) are provided with means (10', 10") suitable for holding these items (5) in the upside down position.

3. A device as claimed in claim 2, wherein said spatial movements comprise a first movement of rotation around an essentially horizontal axis (X) and a second translation movement between a first position at the height of the means (3) for extracting the items from the mould and a second position near a device (23) for extracting the items (5) from the cavities (7).

4. A device as claimed in claim 3, wherein the axis of rotation (X) is horizontal and is essentially orthogonal to a direction (C) for conveying the items (5) away from a mould.

5. A device as claimed in claim 4, wherein the extracting device is placed under said lower second position of the turret (6), and is provided with gripping means suitable for extracting the items from the cavities (7) of the turret (6).

6. A device as claimed in claim 1 or 5 wherein said plates (14) are more than one and each plate supports several cavities.

7. A device as claimed in claim 6, wherein the first bar (18) houses ducts suitable for conveying the working fluids.

8. A process for conditioning plastic items (5) using the device as claimed in claim 1, wherein several items are moulded in an appropriate mould comprising several mould cavities where the items remain until the plastic reaches a specific

consistency and, then, are ejected when they are still warmer than room temperature, this process comprising the following stages:

a) Transferring the items to a location outside the mould,

b) Inserting the items in corresponding cavities (7) of the turret (6),

c) Cooling the items (5) until they reach a second, predefined temperature,

d) Making the turret (6) pivot around a substantially horizontal axis and translate verticallly to a lower position,

e) Removing the items (5) from the cavities (7) by means of gripping means provided on an unloading table.

9. A process as claimed in claim 8 wherein the turret (6) is equipped with a number of cavities that is a multiple of the plurality of injection mould cavities and where the cooling stage c) is a multiple of the injection cycle.

10. A process as claimed in claim 8 wherein the extraction of the items (5) from the cavities (7) is carried out through gripping, using the width constrictions of slits provided in the unloading table suitable for inserting into specific portions of the items.

11. A process as claimed in claim 9, wherein the width constrictions of the slits are in the shape of teeth.

12. A process as claimed in claim 10, wherein the items are preforms and the teeth are inserted between a ring (9) placed near the neck of the preform (5) and the end of the holder (7) housing said preform.